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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,486	10/16/2003	Chris Thomas	TH01-H30	2164
Karl M. Steins Steins & Associates Suite 120 2333 Camino del Rio South San Diego, CA 92108			EXAMINER CONNOLLY, MARK A	
			ART UNIT	PAPER NUMBER
			2115	
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			07/07/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/688,486

**Applicant(s)**

THOMAS ET AL.

**Examiner**

MARK CONNOLLY

**Art Unit**

2115

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-22 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

2. Claim 19 is objected to because of the following informalities: "is a tone" should be corrected to say "if a tone". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 recites the limitation "the current source." There is insufficient antecedent basis for this limitation in the claim. For examination purposes, "the current source" has not been considered in the claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art [AAPA] in view of Kashiwagi et al [Kashiwagi] US Pat No 5802390.
7. Referring to claim 1, the AAPA teaches the method comprising:

- a. adjusting the external power consumption level of an IEEE 1394 transceiver's transmitter responsive to an external cable being attached to said transceiver, said adjusting conducted by a controller for automatic adjustment of power consumption level of the device responsive to whether or not an effective bus connection has been made by said external cable [figs. 1-2 and pgs 3-4 lines 10-14].
- b. wherein a self-calibrated oscillator, a "tone" transmitter, and a "tone" receiver are all responsive to said controller [pg. 3 lines 16-17]. It is interpreted that a remote receiver, receiving the transmitted tone from the device pictured in figure 1 is responsive to controller 18, in that the receiver would send a signal indicating a connection between the two devices in response to receiving a transmitted tone which is controlled through controller 18s control of oscillator 20.

Although the AAPA teaches the method substantially as claimed above, it is not explicitly taught that the termination circuitry is also responsive to the controller. Kashiwagi teaches switching the termination resistors while no data is being transmitted on the bus [abstract and cols. 3-4 lines 33-23]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Kashiwagi in to the AAPA system because it would further lower power consumption of the circuit as taught by Kashiwagi. In addition, since there can be no data communication while disconnected from the external cable and because the controller 18 controls both the oscillator 20 and transmitter 22 in response to whether or not the transceiver is connected to the external cable or not, it is interpreted that in the AAPA-Kashiwagi system the controller would further control the switching of the termination resistors as well in accordance with whether or not the transceiver is connected to the external cable.

8. Referring to claim 2, the AAPA teaches reducing power in the unconnected mode by disabling the tone transmission [pg. 4 lines 3-10].
9. Referring to claim 3, Kashiwagi teaches disconnecting a pair of termination resistors [R1, R2 fig. 1 and cols. 3-4 lines 65-3].
10. Referring to claim 5, the examiner is taking official notice that shutting down unneeded components is well known practice in the art for minimizing power consumption. Components necessary for communication during normal operation such as the bus arbitration logic, encoders/decoders, etc... have no use when the IEEE1394 device is not plugged into the external cable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to shut down all unneeded components while the external cable is unplugged and thus not communicating with another IEEE1394 device in order to further minimize power consumption.
11. Referring to claim 6, this is rejected on the same basis as set forth hereinabove. As mentioned above, communication can not occur unless the external cable is connected to the transceiver. Because Kashiwagi teaches disabling the terminations when no data is being transferred, it was interpreted above that the termination resistors would be enabled after the controller detecting the external cable being connected since only at that time is data transfer possible.
12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Kashiwagi as applied to claims 1-3 and 5-6 above, and further in view of Illegems<sup>1</sup>.

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<sup>1</sup> As cited in the previous office action.

13. Referring to claim 4, although the AAPA and Kashiwagi teach the method substantially as claimed above, it is not explicitly taught to calibrate the oscillator during normal transmission. Illegems teaches generating a stable temperature-invariant oscillation frequency by dynamically adjusting the oscillator (i.e. calibrating) in response to changes in temperature in order to maintain a consistent clock output [abstract and ¶0017]. Because of the high speed nature of the IEEE 1394 serial bus it is well known in the art that a stable oscillation frequency is needed to ensure reliable operation as any differences in frequency, jitter etc... can cause errors with respect to transmitting data from one device via a first clock and sampling/recovering the received data at another device via second clock. In addition, it is also further well known that devices and their components are subject to temperature variations during operation. Due to the need for 1394 serial bus devices to have stable clocking mechanisms, it would have been obvious to include the teachings of Illegems into the AAPA system since the AAPA teaches a 1394 serial bus system but does not detail any precautionary measures to ensure stable oscillation.

*Allowable Subject Matter*

14. Claims 16-22 are allowed.

*Conclusion*

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK CONNOLLY whose telephone number is (571)272-3666. The examiner can normally be reached on M-F 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Connolly/  
Primary Examiner, Art Unit 2115  
7/2/10

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